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#2

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/848,664

DATE: 11/27/2001

TIME: 11:53:10

Input Set : N:\Crf3\RULE60\09848664.txt

Output Set: N:\CRF3\11212001\I848664.raw

3 <110> APPLICANT: Sakiyama-Elbert, Shelly E.
4 Hubbell, Jeffrey A.
6 <120> TITLE OF INVENTION: Controlled Release of Non-Heparin Binding Growth
7 Factors from Heparin Containing Matrices
9 <130> FILE REFERENCE: ETH 108
11 <140> CURRENT APPLICATION NUMBER: 09/848,664
12 <141> CURRENT FILING DATE: 2001-05-03
14 <150> PRIOR APPLICATION NUMBER: 09/298,084
15 <151> PRIOR FILING DATE: 1999-04-22
17 <160> NUMBER OF SEQ ID NOS: 31
19 <170> SOFTWARE: PatentIn Ver. 2.1
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 14
23 <212> TYPE: PRT
24 <213> ORGANISM: Homo sapiens
26 <220> FEATURE:
27 <221> NAME/KEY: MOD_RES
28 <222> LOCATION: (2)
29 <223> OTHER INFORMATION: Xaa is bAla (Beta Alanine)
31 <400> SEQUENCE: 1

ENTERED

W--> 32 Lys Xaa Phe Ala Lys Leu Ala Ala Arg Leu Tyr Arg Lys Ala

33 1 5 10

36 <210> SEQ ID NO: 2

37 <211> LENGTH: 8

38 <212> TYPE: PRT

39 <213> ORGANISM: Homo sapiens

41 <400> SEQUENCE: 2

42 Tyr Lys Lys Ile Ile Lys Lys Leu

43 1 5

46 <210> SEQ ID NO: 3

47 <211> LENGTH: 14

48 <212> TYPE: PRT

49 <213> ORGANISM: Homo sapiens

51 <400> SEQUENCE: 3

52 Lys His Lys Gly Arg Asp Val Ile Leu Lys Lys Asp Val Arg

53 1 5 10

56 <210> SEQ ID NO: 4

57 <211> LENGTH: 14

58 <212> TYPE: PRT

59 <213> ORGANISM: Homo sapiens

61 <220> FEATURE:

62 <221> NAME/KEY: MOD_RES

63 <222> LOCATION: (2)

64 <223> OTHER INFORMATION: Xaa is bALA (Beta Alanine)

66 <400> SEQUENCE: 4

W--> 67 Arg Xaa Phe Ala Arg Leu Ala Ala Arg Leu Tyr Arg Arg Ala

68 1 5 10

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Input Set : N:\Crf3\RULE60\09848664.txt

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82 <211> LENGTH: 11
83 <212> TYPE: PRT
84 <213> ORGANISM: Homo sapiens
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91 <210> SEQ ID NO: 7
92 <211> LENGTH: 10
93 <212> TYPE: PRT
94 <213> ORGANISM: Homo sapiens
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102 <211> LENGTH: 9
103 <212> TYPE: PRT
104 <213> ORGANISM: Homo sapiens
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113 <212> TYPE: PRT
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116 <400> SEQUENCE: 9
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118   1           5           10           15
120 Val Arg Gln Leu Tyr Ile Asp Phe Arg Lys Asp Leu Gly Trp Lys Trp
121           20           25           30
123 Ile His Glu Pro Lys Gly Tyr His Ala Asn Phe Cys Leu Gly Pro Cys
124           35           40           45
126 Pro Tyr Ile Trp Ser Leu Asp Thr Gln Tyr Ser Lys Val Leu Ala Leu
127           50           55           60
129 Tyr Asn Gln His Asn Pro
130   65           70
133 <210> SEQ ID NO: 10
134 <211> LENGTH: 70
135 <212> TYPE: PRT
136 <213> ORGANISM: Homo sapiens
138 <400> SEQUENCE: 10
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Input Set : N:\Crf3\RULE60\09848664.txt

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140      1              5              10              15
142 Leu Arg Pro Leu Tyr Ile Asp Phe Lys Arg Asp Leu Gly Trp Lys Trp
143              20              25              30
145 Ile His Glu Pro Lys Gly Tyr Asn Ala Asn Phe Cys Ala Gly Ala Cys
146              35              40              45
148 Pro Tyr Leu Trp Ser Ser Asp Thr Gln His Ser Arg Val Leu Ser Leu
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152 65              70
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156 <211> LENGTH: 70
157 <212> TYPE: PRT
158 <213> ORGANISM: Homo sapiens
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161 Ala Leu Asp Thr Asn Tyr Cys Phe Arg Asn Leu Glu Glu Asn Cys Cys
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164 Val Arg Pro Leu Tyr Ile Asp Phe Arg Gln Asp Leu Gly Trp Lys Trp
165              20              25              30
167 Val His Glu Pro Lys Gly Tyr Tyr Ala Asn Phe Cys Ser Gly Pro Cys
168              35              40              45
170 Pro Tyr Leu Arg Ser Ala Asp Thr Thr His Ser Thr Val Leu Gly Leu
171              50              55              60
173 Tyr Asn Thr Leu Asn Pro
174 65              70
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178 <211> LENGTH: 42
179 <212> TYPE: PRT
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184 1              5              10              15
186 Pro Ile Val Tyr Tyr Val Gly Arg Lys Pro Lys Val Glu Gln Leu Ser
187              20              25              30
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190              35              40
193 <210> SEQ ID NO: 13
194 <211> LENGTH: 42
195 <212> TYPE: PRT
196 <213> ORGANISM: Homo sapiens
198 <400> SEQUENCE: 13
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200 1              5              10              15
202 Thr Ile Leu Tyr Tyr Ile Gly Lys Thr Pro Lys Ile Glu Gln Leu Ser
203              20              25              30
205 Asn Met Ile Val Lys Ser Cys Lys Cys Ser
206              35              40
209 <210> SEQ ID NO: 14
210 <211> LENGTH: 42
211 <212> TYPE: PRT

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Input Set : N:\Crf3\RULE60\09848664.txt

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212 <213> ORGANISM: Homo sapiens
214 <400> SEQUENCE: 14
215 Glu Ala Ser Ala Ser Pro Cys Cys Val Pro Gln Asp Leu Glu Pro Leu
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218 Thr Ile Leu Tyr Tyr Val Gly Arg Thr Pro Lys Val Glu Gln Leu Ser
219 20 25 30
221 Asn Met Val Val Lys Ser Cys Lys Cys Ser
222 35 40
225 <210> SEQ ID NO: 15
226 <211> LENGTH: 294
227 <212> TYPE: PRT
228 <213> ORGANISM: Homo sapiens
230 <400> SEQUENCE: 15
231 Phe Ser Gln Ser Phe Arg Glu Val Ala Gly Arg Phe Leu Ala Ser Glu
232 1 5 10 15
234 Ala Ser Thr His Leu Leu Val Phe Gly Met Glu Gln Arg Leu Pro Pro
235 20 25 30
237 Asn Ser Glu Leu Val Gln Ala Val Leu Arg Leu Phe Gln Glu Pro Val
238 35 40 45
240 Pro Gln Gly Ala Leu His Arg His Gly Arg Leu Ser Pro Ala Ala Pro
241 50 55 60
243 Lys Ala Arg Val Thr Val Glu Trp Leu Val Arg Asp Asp Gly Ser Asn
244 65 70 75 80
246 Arg Thr Ser Leu Ile Asp Ser Arg Leu Val Ser Val His Glu Ser Gly
247 85 90 95
249 Trp Lys Ala Phe Asp Val Thr Glu Ala Val Asn Phe Trp Gln Gln Leu
250 100 105 110
252 Ser Arg Pro Pro Glu Pro Leu Leu Val Gln Val Ser Val Gln Arg Glu
253 115 120 125
255 His Leu Gly Pro Leu Ala Ser Gly Ala His Lys Leu Val Arg Phe Ala
256 130 135 140
258 Ser Gln Gly Ala Pro Ala Gly Leu Gly Glu Pro Gln Leu Glu Leu His
259 145 150 155 160
261 Thr Leu Asp Leu Arg Asp Tyr Gly Ala Gln Gly Asp Cys Asp Pro Glu
262 165 170 175
264 Ala Pro Met Thr Glu Gly Thr Arg Cys Cys Arg Gln Glu Met Tyr Ile
265 180 185 190
267 Asp Leu Gln Gly Met Lys Trp Ala Lys Asn Trp Val Leu Glu Pro Pro
268 195 200 205
270 Gly Phe Leu Ala Tyr Glu Cys Val Gly Thr Cys Gln Gln Pro Pro Glu
271 210 215 220
273 Ala Leu Ala Phe Asn Trp Pro Phe Leu Gly Pro Arg Gln Cys Ile Ala
274 225 230 235 240
276 Ser Glu Thr Ala Ser Leu Pro Met Ile Val Ser Ile Lys Glu Gly Gly
277 245 250 255
279 Arg Thr Arg Pro Gln Val Val Ser Leu Pro Asn Met Arg Val Gln Lys
280 260 265 270
282 Cys Ser Cys Ala Ser Asp Gly Ala Leu Val Pro Arg Arg Leu Gln His
283 275 280 285

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DATE: 11/27/2001

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TIME: 11:53:10

Input Set : N:\Crf3\RULE60\09848664.txt

Output Set: N:\CRF3\11212001\I848664.raw

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285 Arg Pro Trp Cys Ile His
286      290
289 <210> SEQ ID NO: 16
290 <211> LENGTH: 73
291 <212> TYPE: PRT
292 <213> ORGANISM: Homo sapiens
294 <400> SEQUENCE: 16
295 Ser Pro Asp Lys Gln Met Ala Val Leu Pro Arg Arg Glu Arg Asn Arg
296   1          5          10          15
298 Gln Ala Ala Ala Ala Asn Pro Glu Asn Ser Arg Gly Lys Gly Arg Arg
299          20          25          30
301 Gly Gln Arg Gly Lys Asn Arg Gly Cys Val Leu Thr Ala Ile His Leu
302          35          40          45
304 Asn Val Thr Asp Leu Gly Leu Gly Tyr Glu Thr Lys Glu Glu Leu Ile
305          50          55          60
307 Phe Arg Tyr Cys Ser Gly Ser Cys Asp
308   65          70
311 <210> SEQ ID NO: 17
312 <211> LENGTH: 73
313 <212> TYPE: PRT
314 <213> ORGANISM: Homo sapiens
316 <400> SEQUENCE: 17
317 Leu Gly Ala Arg Pro Cys Gly Leu Arg Glu Leu Glu Val Arg Val Ser
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320 Glu Leu Gly Leu Gly Tyr Ala Ser Asp Glu Thr Val Leu Phe Arg Tyr
321          20          25          30
323 Cys Ala Gly Ala Cys Glu Ala Ala Ala Arg Val Tyr Asp Leu Gly Leu
324          35          40          45
326 Arg Arg Leu Arg Gln Arg Arg Arg Leu Arg Arg Glu Arg Val Arg Ala
327          50          55          60
329 Gln Pro Cys Cys Arg Pro Thr Ala Tyr
330   65          70
333 <210> SEQ ID NO: 18
334 <211> LENGTH: 61
335 <212> TYPE: PRT
336 <213> ORGANISM: Homo sapiens
338 <400> SEQUENCE: 18
339 Ala Ala Glu Thr Thr Tyr Asp Lys Ile Leu Lys Asn Leu Ser Arg Asn
340   1          5          10          15
342 Arg Arg Leu Val Ser Asp Lys Val Gly Gln Ala Cys Cys Arg Pro Ile
343          20          25          30
345 Ala Phe Asp Asp Asp Leu Ser Phe Leu Asp Asp Asn Leu Val Tyr His
346          35          40          45
348 Ile Leu Arg Lys His Ser Ala Lys Arg Cys Gly Cys Ile
349          50          55          60
352 <210> SEQ ID NO: 19
353 <211> LENGTH: 27
354 <212> TYPE: PRT
355 <213> ORGANISM: Homo sapiens

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VERIFICATION SUMMARY

PATENT APPLICATION: US/09/848,664

DATE: 11/27/2001

TIME: 11:53:11

Input Set : N:\Crf3\RULE60\09848664.txt

Output Set: N:\CRF3\11212001\I848664.raw

L:32 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1

L:67 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4